Comparing Maternal Deaths Occurring at Home, in Transit and in Facilities Using Ethiopia’s National MDSR Data

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Declaration of interest

• None
Outline

- Introduction
- Objectives
- Methodology
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- Conclusion and recommendation
Introduction

- Ethiopia is the second most populous country in Africa with projected population size of > 100 million (2016) and covering area of 1.1 million square kms.
- Administratively, Ethiopia is divided into nine geographical regions and two administrative cities.
- Women of reproductive age constitute 23.4% of the population.
- Total fertility rate of 4.6 (2016 DHS)
According to latest EDHS results (2016) in the five years preceding the survey

- 412 per 100,000 LBs MMR
- 28 percent skilled birth attendance
- 62 percent ANC attendance
• Ethiopia has launched Maternal death surveillance and response (MDSR) system in 2013.
• MDSR is being implemented through integrating with existing PHEM/IDSR system categorized as one of immediately reportable event.
• PHEM/IDSR system comprises community and Health facility surveillance with more than 80% completeness and timeliness of reporting on weekly bases.
Introduction(4)

• National MDSR system
  ✓ Weekly reporting
  ✓ Maternal death report summarizing death review

• National database at EPHI

• Home death data set
International experience of home maternal death

- Most countries have an institutional focus to their maternal death reviews
International experience of home maternal death

• Burkino Faso has good community data
  population of 17m and MMR of 341 and 66% SBA

• Bangladesh uses verbal autopsies at sub regional level
  population 164m, MMR of 176 and 20% Skilled birth attendance
Objective

To compare maternal deaths occurring at home, in transit and facilities with respect to differences in causes of death and other key variables useful to MCH policy and practice.
Methods

• We extracted case-based maternal death data for all maternal deaths reported to the national MDSR database of the Public Health Emergency Management centre from May 2013 until June 2016 for which a Verbal Autopsy was conducted.

• Stratifying by place of death, we analysed causes of death and socio-demographic attributes.
In total, 726 maternal deaths were reported based on Verbal Autopsies. 193 (27%) occurred at home, 143 (20%) in transit, and 390 (53%) in facilities.
Result(2)

Proportion of causes of death by Place of death

- **Facility**
  - Haemorrhage: 39
  - HTP: 16
  - Direct other: 8
  - Indirect: 5

- **Transit**
  - Haemorrhage: 61

- **Home**
  - Haemorrhage: 59
  - Direct other: 8
  - Indirect: 5
• Deaths occurring at home or in transit were overwhelmingly due to haemorrhage.
• All other causes of death made up a smaller proportion of home/in transit deaths than those in facilities.
• For example, pre-eclampsia accounted for 8.3% of home deaths, 4.9% of deaths in transit, but 15.9% of facility deaths.
Timing of death

• Most home-based deaths occurred during postpartum (72.1%), notably higher than those in transit (64.2%) and facilities (58.9).
Conclusions

• Post-partum haemorrhage is the largest cause of maternal deaths in Ethiopia, and is heavily represented among home and in-transit deaths.

• This is likely due to delayed recognition of the problem and time reaching an equipped facility.

• Lower educated women may be less likely to recognise danger signs and/or reach a facility quickly.
Recommendations

• This data must be used at all levels of the healthcare system
• At community level efforts to educate communities about haemorrhage signs, use of maternity homes and birth plan
• Health centres must be equipped to deal with haemorrhage with trained staff and oxytocics
Recommendations

• **Health professionals** providing ANC must be aware of the need to identify women at risk of haemorrhage i.e. high parity, multiple pregnancy, previous history of PPH, anaemia etc and advise them accordingly.

• **Health managers/local administrators** must ensure there are good referral networks, and transport is available.

• **Health managers and health professionals** must work together to prioritise post-partum care.
Limitations

- Patchy data - minimum of 15 years to establish comprehensive MDSR system across the country

- Under reporting of maternal deaths

- Lack of post mortem to confirm cause of death
Thanks for your attention